AMENDMENTS TO THE CLAIMS

Please cancel claims 1, 3-5, 7, 8, 11, 15, 16, and 19-21 without prejudice or disclaimer of the subject matter set forth herein.

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1-21. (**canceled**).

22. (**new**) A hydrorefining unit for hydrorefining hydrocarbon feed oil including sulfur-containing compounds, comprising:

a first catalyst layer and a second catalyst layer;

a holding member positioned between the first catalyst layer and second catalyst layer for temporarily holding a liquid component that flows out from the first catalyst layer;

a hydrogen feed source;

a hydrogen introduction part, that is connected to the hydrogen feed source, for simultaneously introducing hydrogen from the hydrogen feed source to the liquid component held in the holding member and the second catalyst layer;

a separation space that is positioned at the bottom of the first catalyst layer for separation of vapor component and liquid component;

a gas outlet through which the vapor component is discharged from the separation space; and

means for adjusting pressure of the separation space and/or a space between the holding member and the second catalyst layer

wherein the hydrogen introduced from the hydrogen introduction part has a first hydrogen gas stream and a second hydrogen gas stream, and

with the means for adjusting pressure, with the first hydrogen stream passing through the liquid component as a countercurrent to the liquid component that flows out from the first catalyst layer and the second gas stream being introduced to the second catalyst layer as a cocurrent with the liquid component that flows out from the holding member.

23. (**new**) A hydrorefining unit according to claim 22, wherein the first catalyst layer, second catalyst layer, and holding member are housed in a single reaction vessel.

24. (**new**) A hydrorefining unit according to claim 22, wherein the holding member is a tray which has a discharge hole for liquid component and in which liquid component accumulates.

25. (**new**) A hydrorefining unit according to claim 22, wherein the holding member is a packing material through which liquid component can pass.

26. (**new**) A hydrorefining unit according to claim 22, wherein impurities are stripped from the liquid component held in the holding member by the first hydrogen gas stream.

27. (**new**) A hydrorefining unit according to claim 26, wherein the impurities are hydrogen sulfide and/or ammonia.

28. (**new**) A method for hydrorefining hydrocarbon feed oil including a sulfur-containing compound using at least two catalyst layers, comprising the steps of:

introducing hydrocarbon feed oil to the first catalyst layer together with hydrogen;

temporarily holding, by using a holding member, a liquid component that has flown out from the first catalyst layer, and stripping the liquid component with a first hydrogen gas stream that is fed from a hydrogen introduction part provided between the first catalyst layer and the second catalyst layer so that the first hydrogen gas stream passes through the liquid component as a countercurrent to the liquid component;

removing a vapor component that has been produced from the first catalyst layer and a vapor component that has been produced by stripping, while adjusting flow of the vapor component produced from the first catalyst layer and the vapor component produced by stripping to perform the stripping; and

introducing the stripped liquid component to the second catalyst layer together with and cocurrent with a second hydrogen gas stream that is fed from the hydrogen introduction part.

29. (**new**) A hydrorefining method according to claim 28, wherein the holding member is a tray which has a liquid discharge hole and in which liquid component accumulates.

30. (**new**) A hydrorefining method according to claim 28, wherein the holding member is a packing material through which the liquid component can pass.

31. (**new**) A hydrorefining method according to claim 28, wherein the hydrocarbon feed oil is hydrocarbon oil in which 90 vol% distillation temperature is 250°C or higher.

32. (**new**) A hydrorefining method according to claim 28, wherein the hydrocarbon feed oil has a 10 vol% distillation temperature of 220 to 300°C and a 90 vol% distillation temperature of 320 to 380°C,

and the hydrorefined hydrocarbon feed oil has a sulfur content of not more than 150 ppm.

33. (**new**) A hydrorefining unit for hydrorefining hydrocarbon feed oil including sulfur-containing compounds, comprising:

a first catalyst layer and a second catalyst layer;

a holding member positioned between the first catalyst layer and second catalyst layer for temporarily holding a liquid component that flows out from the first catalyst layer;

a hydrogen feed source;

a hydrogen introduction part, that is connected to the hydrogen feed source, for simultaneously introducing hydrogen from the hydrogen feed source to the liquid component held in the holding member and the second catalyst layer;

a separation space that is positioned at the bottom of the first catalyst layer for separation of vapor component and liquid component;

a gas outlet through which the vapor component is discharged from the separation space; and

wherein the separation space and/or a space between the holding member and the second catalyst layer can have its pressure adjusted.